AMENDMENTS TO THE CLAIMS

The following is a copy of Applicants' claims that identifies language being added with underlining ("___") and language being deleted with strikethrough ("~~---~~"), as is applicable:

1. (Currently amended) A method comprising the steps of:

encoding plural digitized pictures of a picture sequence according to ~~a video stream in~~ a first video compression specification to produce a video stream ~~compressed format~~;

storing the video stream ~~encoded in the first compressed format~~ in a storage device;

determining whether the video stream is to be transcoded according to a first operating mode or a second operating mode relative to producing the video stream, the determination based on availability of processing resources, wherein the first operating mode is implemented in non-real time and the second operating mode is implemented in real-time; and

transcoding the video stream according to either the first operating mode or the second operating mode responsive to a determination regarding the sufficiency of processing resources.

~~retrieving the video stream encoded in the first compressed format from the storage device;~~

~~decoding the video stream encoded in the first compressed format;~~

~~encoding the decoded video stream in a second compressed format, the second compressed format determined based on one or more characteristics of the video stream, wherein the first compressed format is a format of lesser computational complexity than the second compressed format; and~~

~~storing the video stream encoded in the second compressed format in the storage device.~~

2. (Original) The method of claim 1, wherein the method is implemented by a television set-top terminal.

3. (Cancelled)

4. (Cancelled)

5. (Currently amended) ~~A~~ The method of claim 1, further comprising the steps of:

~~encoding a video stream such that the video stream has a first bit rate;~~

~~storing the video stream having the first bit rate in a storage device;~~

accessing pre-calculated resource estimates corresponding to compressing, decompressing, or a combination of both tasks pertaining to transcoding operations corresponding to the stored video stream, the pre-calculated resource estimates based on worst case conditions for one or more factors,

wherein the transcoding according to the first mode is in real-time and the transcoding according to the second mode is in non-real time, the determination of which mode to execute further based on the availability of resources as determined with respect to the pre-calculated resources.

~~retrieving the video stream having the first bit rate from the storage device;~~

~~decoding the video stream having the first bit rate;~~

~~encoding the decoded video stream such that the decoded video stream has a second bit rate that is lower than the first bit rate, the second bit rate based on one or more characteristics of the decoded video stream; and~~

~~storing the video stream having the second bit rate in the storage device, wherein the method is implemented entirely by a television set-top terminal.~~

6. (Cancelled)

7. (Currently amended) The method of claim 5, wherein the one or more factors includes one or more of video compression specification, picture size, picture rate, or time factor ~~video stream having the first bit rate is in a format that requires higher computational complexity~~.

8. (Currently amended) The method of claim ~~5~~ 7, wherein the time factor provides a plurality of completion times for non-real time operations ~~video stream having the first bit rate and the video stream having the second bit rate are in an MPEG 2 format~~.

9. (Currently amended) The method of claim ~~5~~ 1, wherein the transcoding according to the first operating mode is implemented according to a second video specification different than the first video specification~~video stream having the first bit-rate and the video stream having the second bit-rate are in an H.264 format~~.

10-11. (Cancelled)

12. (Currently amended) The method of claim ~~10~~ 1, wherein the ~~computing~~ processing resources comprise one or more of ~~at least one of~~ an instruction execution resource, bus bandwidth, memory capacity, storage capacity, ~~and~~ or access to storage capacity.

13. (Currently amended) The method of claim ~~10~~ 1**,** wherein the transcoding comprises the steps of:
retrieving the stored video stream;
decompressing the retrieved video stream; and
compressing the decompressed video stream ~~the method is implemented by a television set-top terminal (STT)~~.

14. (Cancelled)

15. (Currently amended) The method of claim ~~14~~ 13, wherein the retrieving, decompressing, and compressing are time-staggered ~~received video stream is compressed in a manner that is responsive to at least one of a format of the received video stream, a bit rate of the received video stream, a picture size corresponding to the received video stream, a frame rate of the received video stream, a color characteristics of the received video stream, a complexity of the received video stream, or frame types that are included in the received video stream~~.

16. (Currently amended) The method of claim ~~14~~ 1, wherein the transcoding according to the second operating mode requires fewer processing resources than the transcoding according to the first operating mode ~~the compressed video stream is recompressed in a manner that is responsive to at least one of a format of the compressed video stream, a bit rate of the~~

~~compressed video stream, a picture size corresponding to the compressed video stream, a frame rate of the compressed video stream, a color characteristics of the compressed video stream, a complexity of the compressed video stream, or frame types that are included in the compressed video stream~~.

17. (Currently amended) The method of claim ~~14~~ 1, wherein the transcoding according to the second operating mode is according to the first video specification. ~~the step of recompressing the compressed video stream comprises:~~

~~decoding the compressed video stream; and~~

~~encoding the decoded video stream.~~

18. (Currently amended) The method of claim ~~14~~ 1, wherein the first operating mode corresponds to a first bit rate and the second operating mode corresponds to a second bit rate different than the first but rate ~~method is implemented by a television set-top terminal (STT)~~.

19. (Currently amended) ~~A~~ The method of claim 1, further comprising the ~~steps~~ step of:

monitoring consumption of ~~computing~~ the processing resources over an extended time period for different time intervals for respective operations that are currently executing and scheduled to be executed at a future time. ~~;~~

~~receiving a video stream;~~

~~compressing the received video stream in a manner that varies based on one or more characteristics of the received video stream; and~~

~~recompressing the compressed video stream at a future time that is responsive to availability of computing resources at the future time.~~

20. (Cancelled)

21. (Currently amended) The method of claim 19, wherein the step of monitoring consumption of ~~computing~~ the processing resources comprises monitoring user input.

22. (Currently amended) The method of claim ~~19~~ 1, wherein the determination is further based on one or more characteristics of the video stream ~~method is implemented by a television set-top terminal (STT)~~.

23. (Currently amended) A set-top terminal (STT) comprising:

an encoder configured to compress plural digitized pictures of a picture sequence according to ~~a video stream in~~ a first video compression specification to produce a video stream ~~compressed format~~;

determine logic configured to determine whether the video stream is to be transcoded according to a first operating mode or a second operating mode relative to producing the video stream, the determination based on availability of processing resources; and

transcode logic configured to transcode the video stream according to either the first operating mode or the second operating mode responsive to a determination regarding the sufficiency of processing resources.

~~a decoder configured to decompress the video stream encoded in the first compressed format; and~~

~~an encoder configured to re-compress the decompressed video stream in a second compressed format responsive to one or more characteristics of the compressed video stream, the encoders configured to compress and re-compress and the decoder residing in the STT.~~

24. (Currently amended) The STT of claim 23, wherein the first ~~second~~ operating mode ~~compressed format enables~~ corresponds to a higher compression rate than the ~~first~~ second operating mode ~~compressed format~~.

25. (Currently amended) The STT of claim 23, wherein the second operating mode ~~first compressed format is~~ corresponds to an MPEG-2 video compression specification ~~format~~ and the ~~second compressed format is~~ first operating mode corresponds to an H.264 ~~format~~ video compression specification.

26-40. (Cancelled)

41. (New) The STT of claim 23, wherein the STT is integrated in a subscriber television system.

42. (New) The STT of claim 23, wherein the first operating mode is implemented in non-real time and the second operating mode is implemented in real-time.

43. (New) The STT of claim 23, wherein the determine logic is further configured to:

access pre-calculated resource estimates corresponding to compressing, decompressing, or a combination of both tasks pertaining to transcoding operations corresponding to the stored video stream, the pre-calculated resource estimates based on worst case conditions for one or more factors,

wherein the transcode logic is further configured to transcode according to the first mode in real-time and according to the second mode in non-real time, the determination of which mode to execute further based on the availability of resources as determined with respect to the pre-calculated resources.

44. (New) The STT of claim 43, wherein the one or more factors includes one or more of video compression specification, picture size, picture rate, or time factor.

45. (New) The STT of claim 44, wherein the time factor provides a plurality of completion times for non-real time operations.

46. (New) The STT of claim 23, wherein the transcode logic is further configured to transcode according to the first operating mode according to a second video specification different than the first video specification.

47. (New) The STT of claim 23, wherein the processing resources comprise one or more of an instruction execution resource, bus bandwidth, memory capacity, storage capacity, or access to storage capacity.

48. (New) The STT of claim 23, wherein the transcode logic is further configured to:
retrieve the stored video stream;
decompress the retrieved video stream; and
compress the decompressed video stream.

49. (New) The STT of claim 48, wherein the transcode logic is further configured to impose respective delays in the retrieve, decompress, and compress operations.

50. (New) The STT of claim 23, wherein the second operating mode requires fewer processing resources than the first operating mode.

51. (New) The STT of claim 23, wherein the second operating mode is according to the first video specification.

52. (New) The STT of claim 23, wherein the first operating mode corresponds to a first bit rate and the second operating mode corresponds to a second bit rate different than the first bit rate.

53. (New) The STT of claim 23, wherein the determine logic is further configured to:
monitor consumption of the processing resources over an extended time period for different time intervals for respective operations that are currently executing and scheduled to be executed at a future time.

54. (New) The STT of claim 53, wherein the monitoring comprises monitoring user input.

55. (New) The STT of claim 23, wherein the determination is further based on one or more characteristics of the video stream.